

CHAPTER 3

Navigational Publications

Introduction

In this chapter you learn of the various publications that are routinely used by the Quartermaster. The QM uses many types and forms of written documents to make possible the full and efficient execution of his or her duties. The majority of these documents are prepared by various governmental agencies, although some originate from commercial sources. The term *document* here is used in a broad sense to include charts, tables, books, and pamphlets, and devices that relate to navigation. We learned about charts in chapter 1 and the Light List in chapter 2. We will now familiarize you with navigational publications that you as a Quartermaster will use.

Objectives

The material in this chapter will enable the student to:

- Select the use of and match publications from a list.
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Publications

Introduction

Government agencies conduct field surveys and research studies of their own. They collaborate with each other and with similar activities in many foreign nations to make sure their charts and other publications will contain the most recent and accurate information. A very valuable input to all types of navigational documents results from reports made by vessel's crews as to new and changed situations.

This chapter is divided into three areas:

- Transit Planning Publications
- Almanacs and Sight Reduction Tables
- Publication Correction and Ordering

The following table has been provided as a quick reference guide. It gives a description of many of the publications that Quartermasters use routinely. Many of these publications will be covered in greater detail in this chapter or elsewhere in this text.

Navigational Publication Quick Reference Guide

Pub Number	Pub Name	Main Focus	Description	Published by/ Available from
	Tidal Current Tables	Prediction Tables	Provide tidal current data, worldwide coverage comprising four volumes.	NOS
	Tide Tables	Prediction Tables	Provide tidal and astronomical data, worldwide coverage comprising four volumes.	NOS
	Chart # 1	Aids to Navigation Systems	A complete listing of all aids to navigation and chart symbology.	NOAA and DMAHTC/ DMA S/N WOBZC1
	Pilot Charts	Planning	Available in atlas form for each ocean basin.	NOAA

Publication Quick Reference Guide, Continued

PubNumber	PubName	Main Focus	Description	Published by/ Available from
9	American Practical Navigator	Technical Navigation Reference	A comprehensive technical reference covering all aspects of navigation. Includes two volumes.	DMAHTC/ DMA S/N NVPUB9V1 NVPUB9V2
102	International Code of Signals	Flag and Light Signals	Specific information on sending signals to non-NATO ships.	DMAHTC/ DMA S/N NVPUB 102
117	Radio Navigational Aids	Radio Signal Information Systems	A reference guide for NavTex, NavInfoNet, and GPS operation.	DMAHTC/ DMA S/N RAPUB117
121 through 200	Sailing Directions	Planning Information	Contains in-depth information on ports and seacoasts. Broken down into volumes containing planning guides and en route guides.	DMAHTC\ Refer to DMA publication DMA Catalog of Maps, Charts, and Related Products, Part 2, Vol 1, Section 10
150	World Port Index	Port Information	Contains specific information on ports around the world in an easy to use table format.	DMAHTC/ DMA S/N NVPUB150
229	Sight Reduction Tables	Celestial Interpolation Tables	Covers 160 of latitude North or South; available in six volumes for all latitudes.	DMAHTC\ Refer to DMA publication DMA Catalog of Maps, Charts, and Related Products, Part 2, Vol 1, Section 10
110-116	List of Lights	Lights, Radio Aids, Fog Signals	Provides specific information on lights and light structure for all areas not covered by Light Lists.	DMAHTC\ Refer to DMA publication DMA Catalog of Maps, Charts, and Related Products, Part 2, Vol 1, Section 10

Transit Planning Publications

Introduction

Transit planning can best be described as the process of gathering and compiling information to ensure a safe and efficient voyage. There are many publications that the Quartermaster uses for transit planning. The publications listed in this section must be studied thoroughly. You should make every attempt to establish an in-depth working knowledge of all publications that are available to the QM.

Coast Pilots

Charts are limited in what can be shown by symbols and abbreviations regarding channels, hazards, winds and currents, restricted areas, port facilities, pilotage service, and many other types of information needed by a navigator for safe and efficient navigation. These deficiencies are remedied by the *Coast Pilots* published by NOS and the *Sailing Directions* published by DMAHTC.

U.S. Coast Pilots are published in nine numbered volumes to cover the waters of the United States and its possessions. They are of great value to a navigator when used with charts of an area both during the planning stage of a voyage and in the actual transit of the area. The contents of *Coast Pilots* have been stored in a computerized data bank, and volumes are reprinted annually with all intervening changes included (except CP8 and CP9, which are revised every 2 years). Interim changes are published in *Notices to Mariners* and *Local Notices to Mariners*.

Fleet Guides

The Defense Mapping Agency Hydrographic/Topographic Center publishes, for U.S. Navy use only, *Fleet Guides*. These are Pub. No 940, Atlantic Area, and Pub. No 941, Pacific Area. These guides contain a number of chapters, each of which covers a port of major interest to naval vessels. They are prepared to provide important command, navigational, repair, and logistic information. This information is much like that contained in *Coast Pilots* and *Sailing Directions*, but it is oriented toward naval interests and requirements; they are not needed by, nor are they available to, non-naval vessels.

The information in *Fleet Guides* is corrected and updated through the publication of changes and/or new editions when required; interim corrections are published in *Notices to Mariners* if the urgency so warrants.

Transit Planning Publications, Continued

Sailing Directions

The DMAHTC *Sailing Directions* provide information comparable to the *Coast Pilots* for foreign coasts and coastal waters. They also provide detailed information for the navigation team that cannot be shown on charts. The appropriate volume of *Sailing Directions*, used with charts of a suitable scale, should enable a navigator to approach strange waters with adequate information for the vessel's safety.

The *Sailing Directions* are based on a division of the world's water into eight "ocean basins" (but these are not the same as those used for two- and three-digit chart numbers). *Sailing Directions* are given three-digit identification numbers starting with DMAHTC Pub No. 121. The *Sailing Directions* are made up of two components and contain information as follows:

Planning Guides. Each *Planning Guide* covers an ocean basin containing chapters of useful information about countries adjacent to that particular ocean basin; information relative to the physical environment and local coastal phenomena; references to publications and periodicals listing danger areas; recommended ship routes; detailed electronic navigation systems and buoyage systems pertaining to that ocean basin.

Changes for each *Planning Guide* and *En route* volume are prepared and published on an as-required basis determined by the number of accumulated revisions.

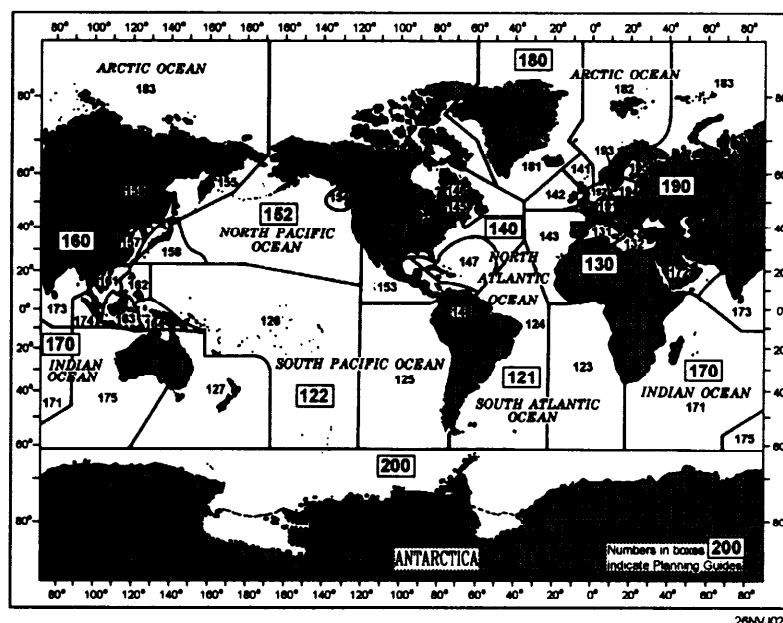


Figure 3-1. Limits of Sailing Directions.

Transit Planning Publications, Continued

Sailing Directions; En-Route Volumes

En Route Volumes. Each *En route* volume includes detailed coastal and port approach information, supplementing the largest scale chart available from DMAHTC. It is intended for use in conjunction with the *Planning Guide* for the ocean basin concerned. Each *En route* volume is divided into a number of sectors, and for each sector information is provided on available charts (with limits shown on an overall diagram as in U.S. chart catalogs); winds, tides, and currents (shown on an outline chart); off-lying dangers; coastal features; anchorages; and major ports (an annotated chartlet with line drawings of aids to navigation and prominent landmarks). Figure 3-1 shows the limits for all *Sailing Directions* volumes.

List of Lights

The DMAHTC *List of Lights*, seven volumes, cover foreign coasts of the world (and limited portions of U.S. coasts); these are Pubs. No. 110 through 116 (see fig. 3-2). The *List of Lights* volumes include descriptive information similar to *Lights Lists*, but because of their greater coverage areas, they list only lighted aids to navigation and fog signals (lighted buoys within harbors are omitted). Each *List of Lights* is published in a new edition at intervals of approximately 12 months; changes and corrections are included frequently, as they are required, in *Notices to Mariners*.

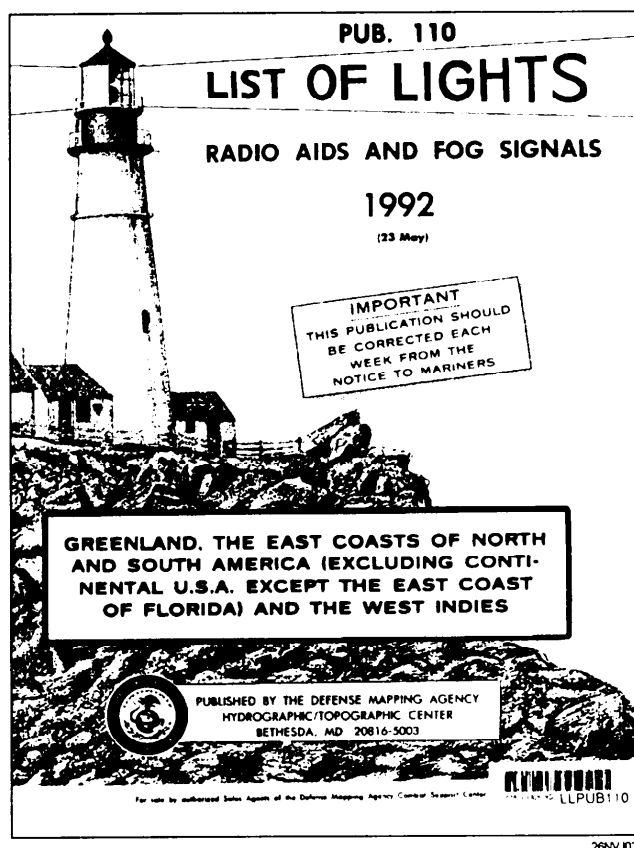


Figure 3-2. List of Lights.

Transit Planning Publications, Continued

Tide Tables and Tidal Current Tables

The *Tide Tables* are prediction tables published in four volumes by the National Ocean Service. They are *East Coast of North and South America, including Greenland*; *West Coast of North and South America, including the Hawaiian Islands*; *Europe and the West Coast of Africa, including the Mediterranean Sea*; and *Central and Western Pacific Ocean and the Indian Ocean* (annual editions). Each volume includes information on the height and time of high and low water at thousands of locations; also included is information on times of sunrise and sunset, moonrise and moonset, and other astronomical phenomena. The *Tide Tables* will be covered in detail in chapter 7.

Tidal Current Tables are prediction tables published in two volumes by NOS--*Atlantic Coast of North America*, and *Pacific Coast of North America and Asia* (annual editions); each volume includes data on the times and strengths of flood and ebb currents and the time of slack water for thousands of locations; also included are diagrams for certain heavily traveled bodies of water that facilitate determination of optimum transit times and speeds, and astronomical data similar to that in *Tide Tables*. The *Tidal Current Tables* will be covered in detail in chapter 7.

Pilot Charts

The *Pilot Charts* present available data in graphic form that will assist the mariner in selecting the safest and fastest routes. Besides timely information of a varied nature, *Pilot Charts* graphically depict magnetic variation, currents, prevailing winds and calms, percentage of gales, tracks of tropical and extratropical cyclones, wave heights, surface air and water temperatures, percentage of fog, surface barometric pressure, ice and iceberg limits, the location of ocean weather-station ships, and recommended routes for steam and sailing vessels. Additionally, such topics as winds (including gales and cyclones), pressures, temperatures, visibility, and wave heights are discussed in brief paragraphs at the sides of each chart. *Pilot Charts* are published quarterly with each sheet containing three monthly charts and an article of general information.

Transit Planning Publications, Continued

Distances Between Ports

The Distances Between Ports publication contains information on ports of entry for the world. It is useful and easy to use. Ports are indexed by number and name and laid out in a tabular format. The World Port Index should be used as a quick reference guide only. Up-to-date information and specific planning information must be obtained from the applicable *Sailing Directions*, *Coast Pilot*, or *Fleet Guide*.

Another useful publication that gives information concerning the distance a ship must travel between *two* ports is *Distances Between United States Ports*, published by NOS; it tabulates approximately 10,000 distances along the shortest routes marked by aids to navigation.

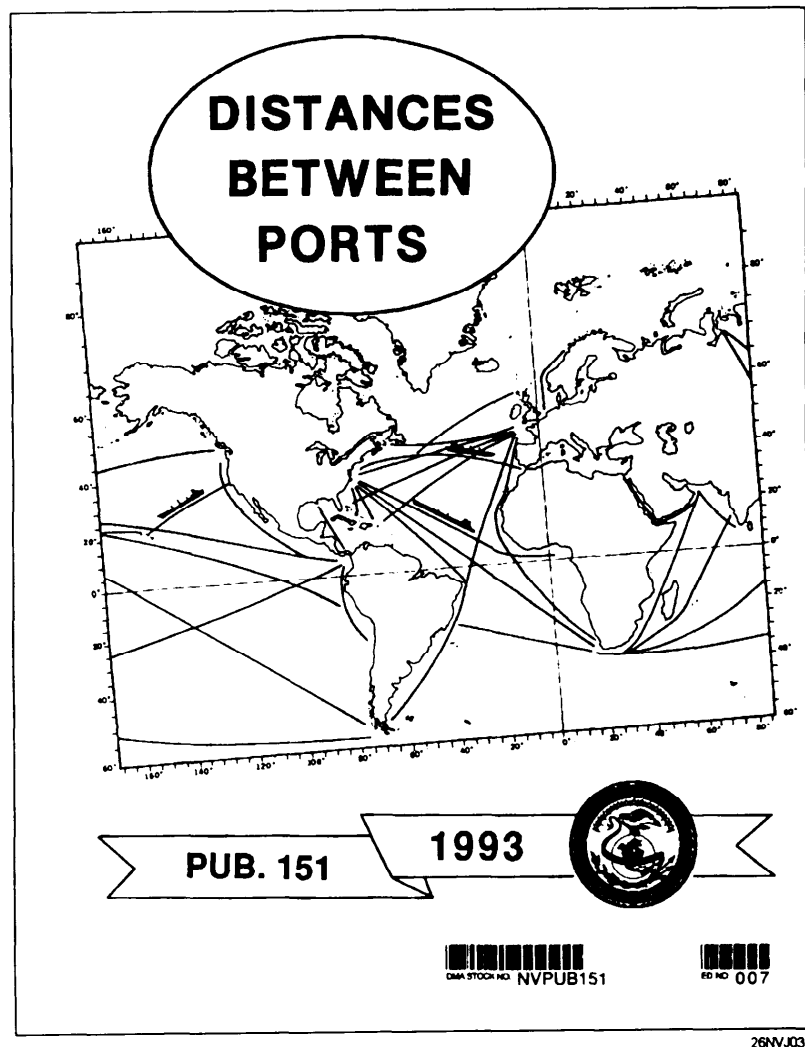


Figure 3-3. Distances Between Ports.

Celestial Navigation Publications

Almanacs

Nautical Almanacs, volumes of information that tabulate the position of various celestial bodies, the times of sunrise and sunset, moonrise and moonset, and other astronomical data used by navigators, are prepared jointly by the U.S. Naval Observatory and the Royal Greenwich Observatory in England. However, the almanac volumes are printed both in the United States and in England.

The *Nautical Almanac* is published annually, and the *Air Almanac* is published twice each year. These publications give ephemeristic data for marine and air navigation respectively (the *Air Almanac* can be, and sometimes is, used by marine surface navigators). These volumes are used in many other countries with minor modifications, chiefly changes in the language used for page headings and in the explanatory material. *The Almanac for Computers* is also published by the U.S. Naval Observatory with mathematical data and instructions for the computation of ephemeristic data using electronic computers or advanced models of calculators. These almanacs are discussed in greater detail in later text.

Tables

Sight Reduction Tables for Marine Navigation, Pub. No. 229, published by DMAHTC, in six volumes, each volume covering 16° of latitude, North or South (1° overlap between volumes) (see chapter 9).

Sight Reduction Tables for Air Navigation, Pub. No. 249, published by DMAHTC in three volumes; offers somewhat greater ease and speed in sight reduction, but has a limited range of declination and gives a lower order of precision as to position (see chapter 9).

Publication Correction and Ordering

Introduction

As charts and other publications accumulate a sufficient number of changes and corrections, they are reprinted as a revision with the same edition number or as a new edition. Certain publications, such as *Light Lists* and *Coast Pilots*, are reprinted on an annual schedule. Other publications may have numbered "changes" issued, usually in the form of reprinted pages for direct insertion into the volume after the superseded pages are removed.

Publication Correction

Publication correction procedures are the same as those listed in chapter 1 for charts using the *Notices to Mariners* each week. The exception is that you will either make direct pen and ink changes to the text in publications or you may cut and paste information into the affected publication.

Caution: Do NOT use tape to make changes to publications, when cutting and pasting information, use a glue stick to paste information.

Ordering

Most publications are available from DMAHTC. Refer to chapter 10 of *the DMA Catalog of Maps, Charts, and Related Products* to obtain the correct DMA stock number. Follow the same procedures as you would to order a chart as listed in chapter 1.